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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Reference Number 4641-55447  
Application Number 09/659,211

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#8/1  
4/30/03

Application of: HIRAYANAGI

Application No. 09/659,211

Art Unit: 2825

Filed: September 11, 2000

CERTIFICATE OF MAILING

For: ALIGNMENT-MARK DETECTION METHODS  
AND DEVICES FOR CHARGED-PARTICLE-  
BEAM MICROLITHOGRAPHY, AND  
MICROELECTRONIC-DEVICE  
MANUFACTURING METHODS COMPRISING  
SAME

I hereby certify that this paper and the documents  
referred to as being attached or enclosed herewith are  
being deposited with the United States Postal Service  
on April 8, 2003 as First Class Mail in an envelope  
addressed to: COMMISSIONER FOR PATENTS,  
WASHINGTON, D.C. 20231.

Examiner: Caridad Everhart

*Amal L. Singh*  
Attorney for Applicant

Date: April 8, 2003

COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

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AMENDMENT AND REPLY TO OFFICE ACTION

This paper is in reply to the Office action of October 8, 2002.

Please amend the subject application as follows:

In the claims:

1. (Amended) In a method for performing charged-particle-beam (CPB) microlithography of a specimen of which a surface has a crystal-lattice orientation, and an alignment mark is formed on the surface, a method for detecting a position of the alignment mark, comprising:
- (a) irradiating a charged particle beam onto an area of the specimen surface having the crystal-lattice orientation but at which the alignment mark is not present, and detecting backscattered charged particles propagating from the irradiated area, so as to obtain a first backscattered-particle signal;
  - (b) irradiating the charged particle beam onto the alignment mark, and detecting backscattered charged particles propagating from the irradiated alignment mark, so as to obtain a second backscattered-particle signal;

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